SKRIPSI

TITA SUGESTI

PERBANDINGAN AKTIVITAS ASAM SINAMAT, ASAM 3-HIDROKSISINAMAT, DAN ASAM 4-HIDROKSISINAMAT SEBAGAI TIROSINASE INHIBITOR

FAKULTAS FARMASI UNIVERSITAS AIRLANGGA
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Lembar Pengesahan

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ABSTRACT

The investigation of inhibition of tyrosinase activity by cinnamic acid, 3-hydroxycinnamic acid, and 4-hydroxycinnamic acid was done using L-Tyrosine as substrate.

The percentage of tyrosinase inhibition activity was measured using UV-Vis spectrophotometer that give the absorbance of dopachrome produced by the reaction of L-Tyrosin, tyrosinase, and the inhibitor.

Michaelis Menten constant (KM) and maximal velocity (V_{max}) of the tyrosinase was determined by Lineweaver-Burk's plots. The value of K_M and V_{max} which obtained were 0,961 mM and 0,020 μmol/min. Lineweaver-Burk's plot of several concentration of L-Tyrosine showed that cinnamic acid inhibited tyrosinase activity non competitively but the 3-hydroxycinnamic acid and 4-hydroxycinnamic acid inhibited competitively.

The percentage of tyrosinase activity of cinnamic acid, 3-hydroxycinnamic acid, and 4-hydroxycinnamic acid were 14,0%, 12,6%, and 79,1% respectively.

Key word : cinnamic acid, 3-hydroxycinnamic acid, 4-hydroxycinnamic acid, tyrosinase, inhibition activity.